PCoP Conference 2008

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Incorporating Impacts of Relative Sea Level Rise into the Planning Process

by Jeremy M. LaDart
Mobile District (SAM)

Mississippi Coastal Improvements Program

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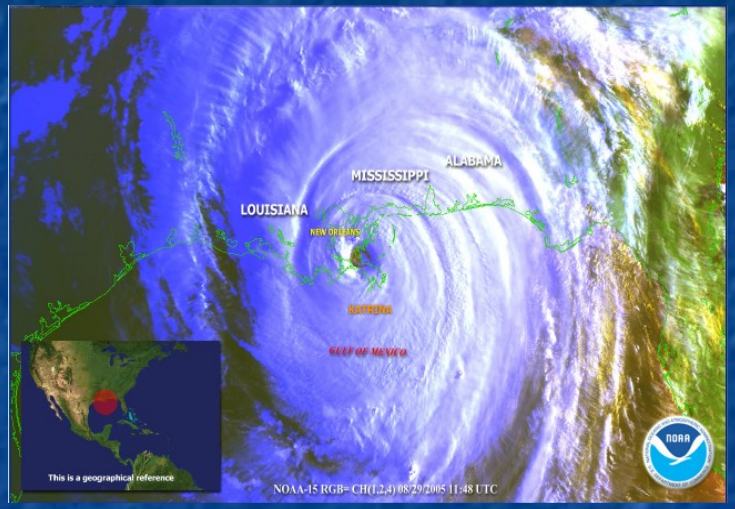

Studies related to the consequences of the 2005 hurricanes

* All efforts fully coordinated with the

- $10 Million Emergency Supplemental Appropriations (P.L. 109-359) 30 December 2005
- Cost Effective Projects in lieu of NED benefits
- No Incremental Benefit-Cost Analysis
- 6 month interim and 24 month comprehensive report requirements

- Hurricane and Storm Damage Reduction
- Salt Water Intrusion
- Shoreline Erosion
- Fish and Wildlife Preservation
- Other Water Related Resource Projects

Policy Guidance

ER 1105-2-100
Appendix E

- Should be considered in every study
- Extent of considerations depends on the historical record
- Look at impacts of higher relative sea level rise on design
- Conduct a sensitivity on the effects on plan evaluation and selection
- If plans are sensitive, design considerations may be warranted

Scenario Planning

- Current planning models do not account for relative sea level rise
- Evaluation of multiple future without project scenarios
- More Informed Decisions = More Time and Cost

Coastal Mississippi

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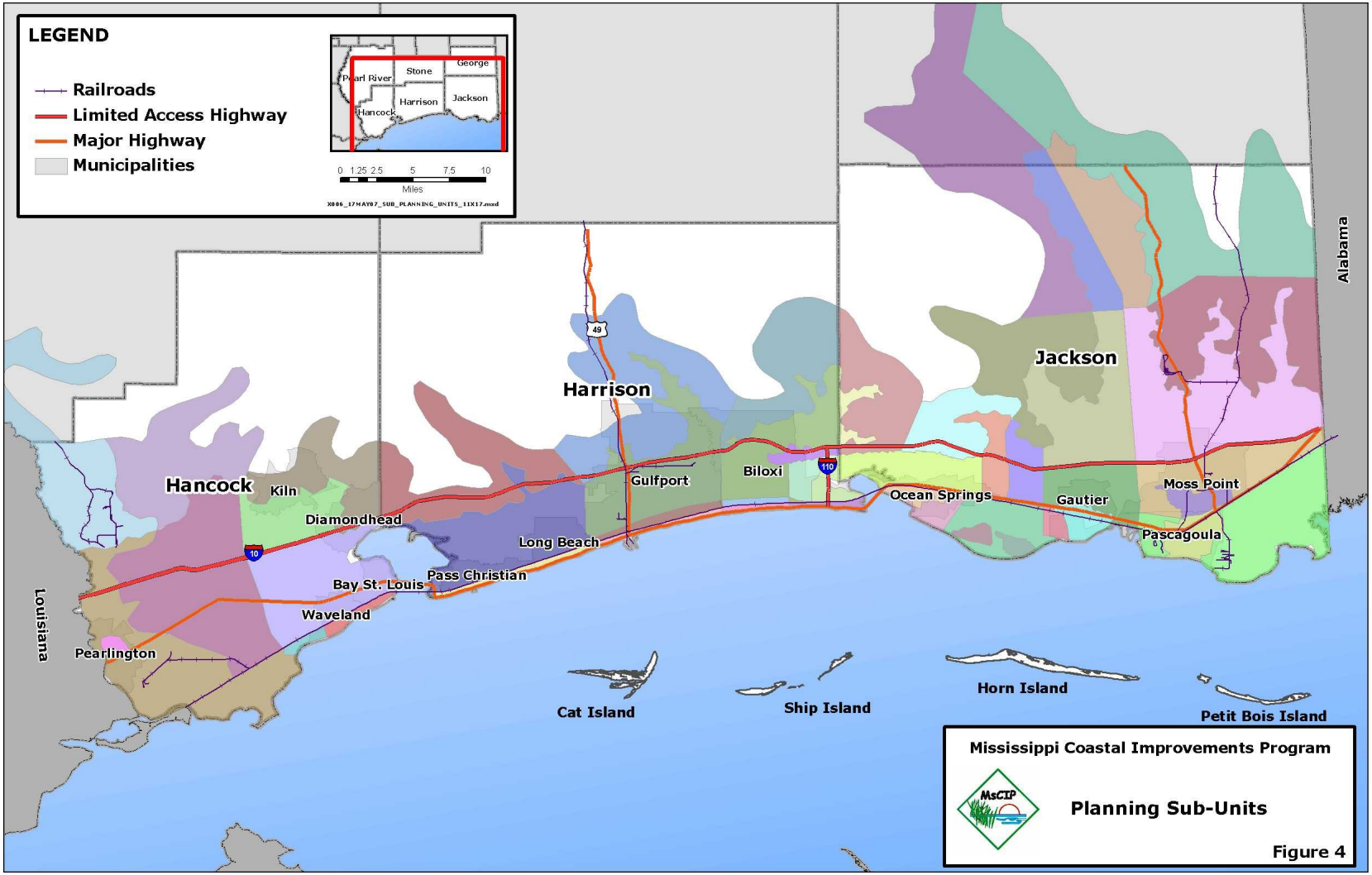

Pearlington, MS

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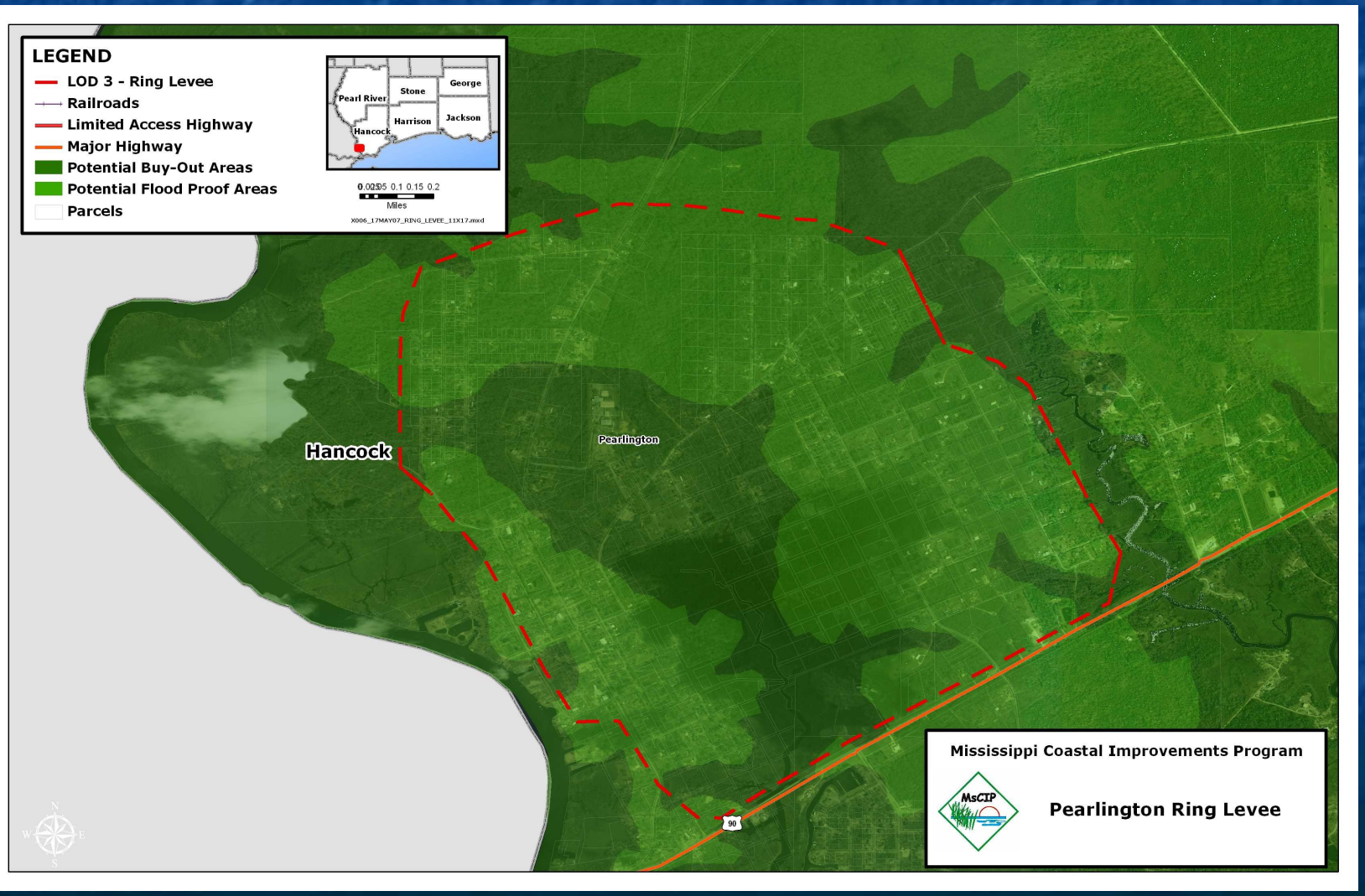

Types of Measures Pearlington, MS

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Pearlington Area Future Scenario One (Base Relative Sea Level Rise)			
	EAD Reduced	AA Costs	Net Benefits
20FT Ring Levee	**$11,241,000**	**$6,473,144**	**$4,767,856**
30FT Ring Levee	$11,560,000	$7,436,381	$4,123,619
.01% Chance Nonstructural	$10,997,880	$9,083,518	$1,914,362
20FT Nonstructural	$11,069,000	$7,489,042	$3,579,958
30FT Nonstructural	$11,569,000	$7,489,042	$4,079,958

Pearlington Area Future Scenario Three (Moderate Relative Sea Level Rise)			
	EAD Reduced	AA Costs	Net Benefits
20FT Ring Levee	**$11,894,000**	**$6,473,144**	**$5,420,856**
30FT Ring Levee	$12,267,000	$7,436,381	$4,830,619
.01% Chance Nonstructural	$12,260,000	$9,083,518	$3,176,482
20FT Nonstructural	$12,813,000	$7,489,042	$5,323,958
30FT Nonstructural	$12,885,000	$7,489,042	$5,395,958

Pearlington Area Future Scenario Five (High Relative Sea Level Rise)			
	EAD Reduced	AA Costs	Net Benefits
20FT Ring Levee	$13,088,000	$6,473,144	$6,614,856
30FT Ring Levee	$13,228,000	$7,436,381	$5,791,619
.01% Chance Nonstructural	$13,520,000	$9,083,518	$4,436,482
20FT Nonstructural	$14,123,000	$7,489,042	$6,633,958
30FT Nonstructural	**$14,205,000**	**$7,489,042**	**$6,715,958**

Types of Measures Pearlington, MS

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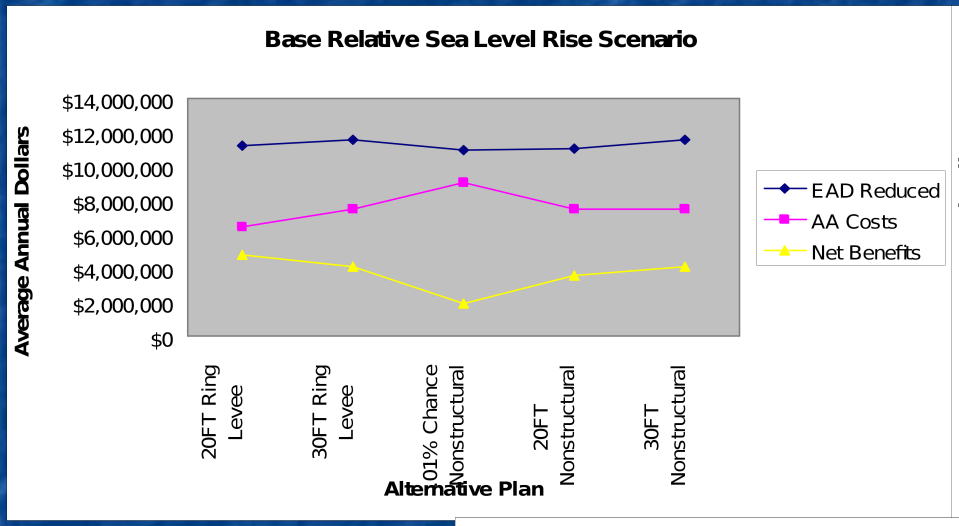

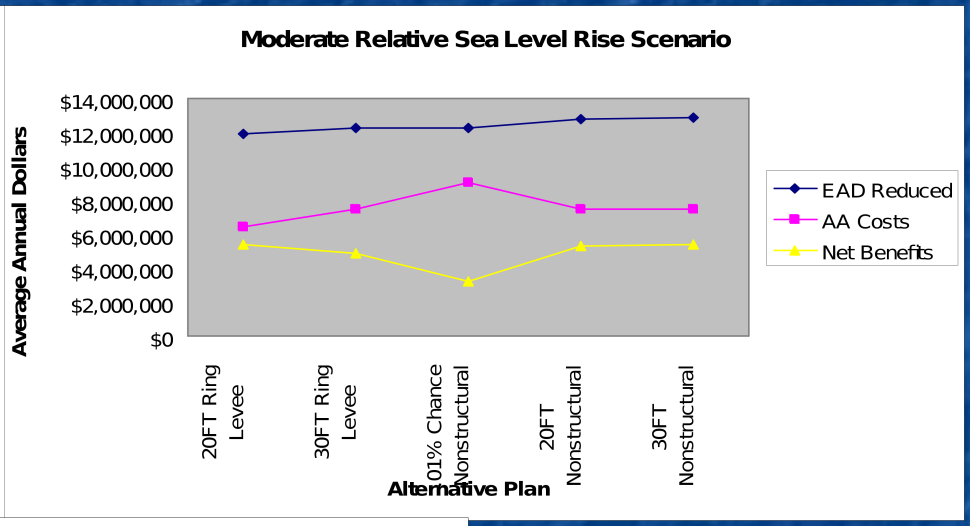

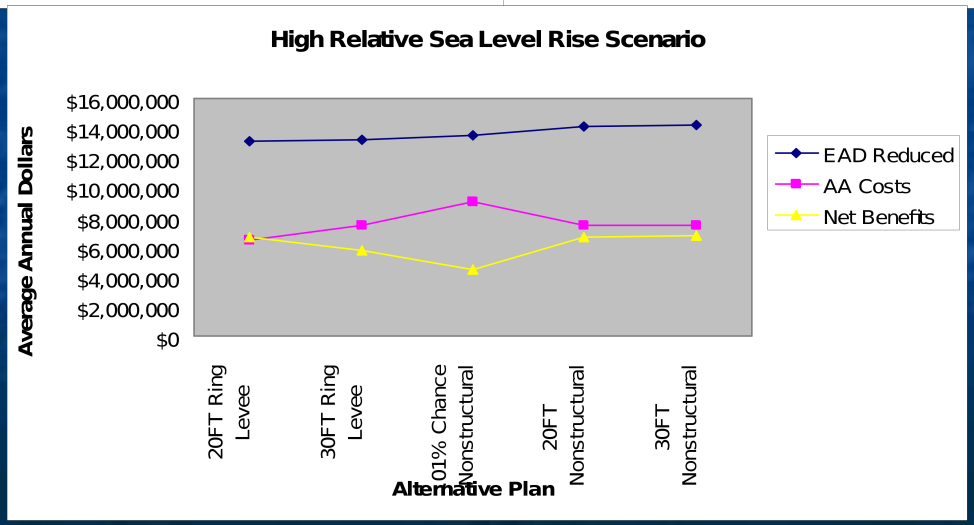

Impacts of Relative Sea Level Rise

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NED	RED	EQ	OSE
Degradation of risk reduction	Increased impacts to regional economy	Greater degradation of ecological resources	Increased threats to health and safety
Increased emergency costs	Greater strain on local tax burden	Increased risk of plan failure	Greater potential for loss of life

Conclusions

- Determine if Relative Sea Level Rise Could Effect Plan Selection
- Focus on Residual Damage/Risk
- Communicate Risk With Local Stakeholders
- Identify Construction Implications
- Employ Continuous Planning

QUESTIONS???

- MsCIP WEBSITE
- http://meetingroom.groupsolutions.us/

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